What is claimed is:

1. A fiber comprising a styrene-isobutylene copolymer, wherein said fiber is formed by a dry spinning process.

2. The fiber of claim 1, wherein said copolymer comprises a polyisobutylene block and a polystyrene block.

3. The fiber of claim 1, wherein said copolymer is a polystyrene-polyisobutylene-polystyrene triblock copolymer.

4. A medical article comprising the dry spun fiber of claim 1.

5. The medical article of claim 4, wherein said medical article comprises a woven region comprising said fiber.

6. The medical article of claim 4, wherein said medical article comprises a non-woven region comprising said fiber

7. The medical article of claim 4, wherein said fibers are thermally bonded.

8. The medical article of claim 4, wherein said fibers bonded by contact with one another followed by solvent removal.

9. The medical article of claim 4, wherein said medical article is selected from hollow fibers for oxygenators, hernia repair patches, gastrointestinal tract patches, uro-gynecological tract patches, vascular access ports, fabric to join devices to human arteries, wound dressings, membranes, anterior cruciate ligaments, neurovascular aneurysm treatment articles, valve leaflets for heart valves, valve leaflets for venous valves, stent grafts, gastrointestinal tract grafts, uro-gynecological tract grafts, vascular

grafts, peripheral vascular grafts, arterio-venous access grafts, embolic filters, and scaffolds for tissue engineering.

10. The medical article of claim 4, wherein said medical article is a porous, tubular medical article.

11. A process for forming the fiber of claim 1, said process comprising:

(a) providing a solution that comprises (i) said copolymer dissolved in (ii) a solvent system comprising an organic solvent;

(b) forming an extrudate by extruding said solution from an orifice; and

(c) removing said solvent system from said extrudate while stretching to form said fiber.

12. The process of claim 11, wherein said solvent system comprises tetrahydrofuran.

13. The process of claim 11, wherein said solvent system comprises methyl ethyl ketone and hexane.

14. The process of claim 11, wherein said solvent system comprises chloroform.

15. The process of claim 11, wherein said copolymer is provided in said solvent system at a concentration ranging from 10% to 75% weight/volume.

16. The process of claim 11, wherein said solution is extruded at a temperature ranging from 10 to 100°C.

17. The process of claim 11, wherein said solution is extruded into a gaseous environment.

18. The process of claim 17, wherein said gaseous environment comprises air.

19. The process of claim 11, wherein said environment is heated.

20. The process of claim 11, further comprising stretching said extrudate while removing said solvent.

21. The process of claim 11, further comprising immersing said extrudate into a precipitating solution.

22. A process for forming the medical article of claim 4 comprising:

(a) extruding a solution comprising said copolymer and an organic solvent from an orifice into an environment where said solvent system is evaporated and

(b) wrapping said fiber around a rotating member under conditions whereby said fiber retains sufficient solvent to bond to underlying fiber portions on said rotating member, thereby forming said medical article.

23. The fiber of claim 1, further comprising a therapeutic agent.